which are indicative of the magnitude of the force that is being applied to the panel member.

Using the same X-Y coordinate system that was previously described in connection with the first embodiment of invention and which is depicted in FIG. **4**, the X and Y coordinates of a touched location on the panel member **12***c* of the embodiment of FIGS. **9** and **10** are:

$$X = \frac{1}{2} - \frac{Z_L}{Z_L + Z_R} \qquad Y = \frac{1}{2} - \frac{Z_B}{Z_B + Z_T}$$

where:

X is the position of the touched location along the X axis'

Y is the position of the touched location along the Y axis,

Z_B, Z_T, Z_R, Z_L are respectively the detected forces that are being exerted on the supports **14***c* at the bottom, top, right side and left side of panel member **12***c* as viewed in FIG. **9**.

While the invention has been described with reference to certain specific embodiments many modifications of the apparatus are possible and it is not intended to limit the invention except as defined in the following claims.

PROGRAM LISTING

(POSITION.BAS)

```
10   SET = 0
20   KEY OFF
30   CLS
40   INPUT "Enter ADC CHANNEL";ADC
50   IF ADC < 769 OR ADC > 797 THEN PRINT "769 <= ADC <= 797": GOTO 40
60   STATUS = ADC - 1
70   CLS
80   LOCATE 24,30: PRINT"Press Esc to exit"
90   LOCATE 5,1
100  FOR CHANNEL = 0 TO 3
110  OUT ADC, CHANNEL * 16: REM select channel
120  X = INP(ADC): REM start a conversion
130  COUNT = INP(ADC + 1) * 256 + INP(ADC): REM read the answer
140  VOLTS = (COUNT-32768!) * 1.52588E-04: REM scale in volts
150  Z(CHANNEL) = COUNT
160  NEXT CHANNEL
170  IF INKEY$ = CHR$(27) THEN END
180  IF SET < 3 THEN GOSUB 340
190  PRINT ZBASE0 - Z(0), ZBASE1 - Z(1), ZBASE2 - Z(2), ZBASE3 - Z(3)
200  Z(0) = ZBASE0 - Z(0)
210  Z(1) = ZBASE1 - Z(1)
220  Z(2) = ZBASE2 - Z(2)
230  Z(3) = ZBASE3 - Z(3)
240  ZSUM = Z(0) + Z(1) + Z(2) + Z(3)
250  IF ZSUM > -80 THEN GOTO 90
260  XVALUE1 = INT (1000 * (.5 - ((Z(0) + Z(1)) / (ZSUM))))
270  XVALUE2 = INT (1000 * (.5 + ((Z(2) + Z(3)) / (ZSUM))))
280  PRINT "X "; (XVALUE1 + XVALUE2) / 2; "  ",
290  YVALUE1 = INT (1000 * (.5 - ((Z(0) + Z(3)) / (ZSUM))))
300  YVALUE2 = INT (1000 * (.5 + ((Z(1) + Z(2)) / (ZSUM))))
310  PRINT "Y "; (YVALUE1 + YVALUE2) / 2; "  ",
320  PRINT "Z "; INT (ZSUM * .007629);"
330  GOTO 90
340  ZBASE0 = Z(0)
350  ZBASE1 = Z(1)
360  ZBASE2 = Z(2)
370  ZBASE3 = Z(3)
380  SET = SET + 1
390  RETURN
```

I claim:

1. In a touch sensitive panel for generating selected ones of any of a plurality of different signals each of which is generated by touching a different location on the panel, the combination comprising:

a rectangular panel formed of material which exhibits a degree of elasticity,

a plurality of panel member supports which support said panel member at spaced apart regions thereof, the panel member supports being separate from the panel member,

force sensing means positioned upon said panel member for sensing the magnitudes of the forces that are applied to each of said spaced apart supports by said panel member when said panel member is touched at a selected location thereon, wherein said forces are sensed by detecting the deformation of said panel member in the vicinities of each of said supports that is caused by touching of said panel member, and

location analyzing means for determining the location on said panel member that is being touched by comparing the magnitudes of said forces that are applied to said spaced apart supports by said panel member and for generating the one of said signals that corresponds to the determined location.

2. The apparatus of claim **1** wherein said panel member has a touch sensitive area with said first and second opposite ends and wherein at least one of said panel member supports is situated at each of said ends and wherein said location analyzing means compares the force which said panel member exerts at said first end of said touch sensitive area with the sum of the forces exerted by said panel member at both ends of said area in order to sense the position of said touched location along said panel.